



Australian Bureau of Statistics

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Summary

About this Release

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The Australian Bureau of Statistics (ABS) is developing prototype electronic instruments for collection of statistical economic data from businesses. Major concerns are data quality and instrument driven reporting bias, especially when electronic instruments are used in parallel with other collection methods or as regular data providers change their reporting mode. In order to investigate these aspects of electronic data capture it is necessary to have viable prototype instruments. There is little applied or theoretical research in this area, so ABS staff reviewed the applicable existing literature in an overlapping range of fields that are expected to contribute to electronic instrument design. These were cognitive psychology, human computer interaction, interface design, self completed and interviewer-based paper form design, and computer assisted data capture instrument design and use. Four main design issues were also identified. These were navigation, help and instructions, screen or graphical design, and edits and validation. These informed the design of two separate new instruments and the evaluation of these two plus a third that was already in use. The instruments were evaluated by field visits to 36 data providers in three unrelated surveys. This paper describes the starting principles in terms of two relevant cognitive models, for data collection and for general paper to screen design, and as result of testing the instruments, identifies a third model relating to strong computer application-type driven expectations. The testing method and a brief description of the outcomes of the tests are given in the framework of the main design issues initially identified. Four observations about the evaluation procedure are also noted.

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